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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/882,133	06/15/2001	Shuo-Yen Robert Li	8	9259
7590	02/23/2005		EXAMINER TON, ANTHONY T	
John T. Peoples 14 Blue Jay Court Warren, NJ 07059			ART UNIT 2661	PAPER NUMBER

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/882,133

Applicant(s)

LI, SHUO-YEN ROBERT

Examiner

Anthony T Ton

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23-25, 31, 33-38 and 40-42 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 22, 26-30, 32 and 39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9-11-01 & 6-15-01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. **Claims 22, 26-30, 32 and 39** are objected to because of the following informalities:

a) **In claim 22:** terms “**the** condition” in line 3, “**the** correspondence” in line 11, “**the** connection states” in line 15, and “**the** shuffle exchange” in line 19 are improper since there are no antecedent bases for such terms in the claim.

Examiner suggests changing these terms to “a condition”, “a correspondence”, “connection states”, and “a shuffle exchange”, respectively.

b) **In claims 26-30 and 32:** term “**X2** interconnection network” is improper since the number 2 should be subscripted.

Examiner suggests changing this term to “**X₂** interconnection network”.

c) **In claim 39:** terms “**the** condition” in line 3, “**the** correspondence” in line 11, “**the** connection states” in line 16, and “**the** shuffle exchange” in line 20 are improper since there are no antecedent bases for such terms in the claim.

Examiner suggests changing these terms to “a condition”, “a correspondence”, “connection states”, and “a shuffle exchange”, respectively.

Appropriate correction is required.

Allowable Subject Matter

2. The following is an examiner’s statement of reasons for allowance:

a) **In Regarding to Claims 22-38:** The prior arts fail to teach a method for implementing a class of NxN decompressors each serving a connection request to route m incoming signals,

$m \leq N$, and for enabling the service of any connection request in a nonblocking way on a condition that the connection request is compliant to certain constraints, the method for each of the decompressors comprising a combination of steps of:

wherein the constraints on the connection request are that:

- (1) the m active input addresses are consecutive upon a rotation of the ordering of the N input addresses, and
- (2) the correspondence between the m active input addresses and the m active output addresses is order preserving after the rotation; and

the class excluding

- (i) those having a switch constructed from the banyan network of switching cells prepended with a shuffle exchange, and
- (ii) those having a switch constructed from the shuffle-exchange network of switching cells prepended with the shuffle exchange.

b) In Regarding to Claims 39-42: The prior arts fail to teach a class of $N \times N$ decompressors each serving a connection request to route m incoming signals, $m \leq N$, and for enabling the service of any connection request in a nonblocking way on a condition that the connection request is compliant to certain constraints, each of the decompressors comprising a combination of steps of:

wherein the constraints on the connection request are that:

- (1) the m active input addresses are consecutive upon a rotation of the ordering of the N input addresses, and

(2) the correspondence between the m active input addresses and the m active output addresses is order preserving after the rotation; and
the class excluding

- (i) those having a switch constructed from the banyan network of switching cells prepended with a shuffle exchange, and
- (ii) those having a switch constructed from the shuffle-exchange network of switching cells prepended with the shuffle exchange.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Citation of Relevant Prior Art

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Patent number of the prior art are listed below are considered as citation of relevant prior art in the field of the invention relating to broadband switching and control over a massive broadband switching network:

McKeown (US 5,500,858); Ofek (US 6,757,282); Batholomew et al. (US 6,400,708); Galand et al. (US 5,568,477); Ha-Duong (US 5,768,270); Muller et al. (US 6,081,512); Howe (US 6,611,519); Lund et al (US 5,517,495); McMillen et al. (US 6,473,827); Chao et al. (US 5,724,351); Cloonan et al. (US 5,724,349); Krishnamoorthy et al. (US 5,541,914); and Cordell et al. (US 5,367,520).


Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Anthony T Ton** whose telephone number is **571-272-3076**. The examiner can normally be reached on M-F: 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Chau Nguyen** can be reached on **571-272-3126**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

by: 
Anthony T. Ton
Patent Examiner
February 18, 2005


PHIRIN SAM
PRIMARY EXAMINER